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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BEKKER, KELLY JO	

ART UNIT	PAPER NUMBER
1794	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/539,150	MUELLER ET AL.	
	Examiner	Art Unit	
	KELLY BEKKER	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,6,8,14,15 and 18-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,6,8,14,15 and 18-20* is/are rejected.

7)☒ Claim(s) *8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Amendments made December 10, 2010 have been entered.
Claims 1, 6, 8, 14, 15, and 18-20 remain pending.

Priority

This application is a national stage entry of International Application No. PCT/CH03/00832, filed December 19, 2003, which claims priority to German Application No. 102609632, filed December 20, 2002. The copy of the certified copy of the priority has been filed with the instant Application, however, it is noted that the Foreign Application is not in English and thus it is unclear as to if the instant claims have priority to the Foreign Application.

Claim Rejections - 35 USC § 112 1st Paragraph

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The 112 first paragraph rejections of claims 3-5, 9, 12, 13, and 17 have been withdrawn as the claims have been canceled.

The 112 first paragraph rejections of claims 1, 6, 8, 14, 15, and 18 due to the terms “rubber elastic texture” recited in claim 1 have been with drawn in light of applicant’s amendments made December 10, 2009.

The following 112 first paragraph rejections remain:

Claims 14 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 14 recites, “The starch matrix has a network, which is formed by homocrystallites and/or heterocrystallities”. Although the specification discloses a candy with homocrystallites and/or heterocrystallities networks, the specification does

not disclose how such a network is made. The specification does not disclose the processing parameters or composition needed to make a network with the instantly claimed properties.

Claim 18 recites, "the preparation of the pre-product suppressing the formation of a network and the amorphous state being frozen in". Although the specification disclose the a pre-product, the specification does not disclose how the pre-product is prepared, how the formation of a network is suppressed and how the amorphous state is frozen in.

Response to Arguments, 112 first paragraph

Applicant's arguments filed December 10, 2009 regarding the remaining 112 first paragraph rejections have been fully considered but they are not persuasive.

Applicant argues that at least the methods section and working examples of the specification, together with the knowledge in the art evidenced by WO 03/035026 and WO 03/035044 enable a person skilled in the art to make the candy claimed.

Applicant's argument is not convincing as (1) the method and examples section in the specification provide for the use of common methods and do not specify or even suggest the steps critical in order to produce the instantly claimed product; (2) The cited references which are referred in the remarks and specification have any been considered only for their abstract as the references are not in English; and (3) as discussed above, the claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim Rejections - 35 USC § 112 2nd Paragraph and 101

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The 112 first paragraph rejections of claims 2-5, 9-13, 16, and 17 have been withdrawn as the claims have been canceled.

The 101 rejection of claim 11 for omitting essential method steps has been withdrawn as the claim has been canceled.

The 112 first paragraph rejections of claims 1, 6, 8, 14, 15, and 18 due to the terms “rubber elastic texture” recited in claim 1 have been with drawn in light of applicant’s amendments made December 10, 2009.

The following 112 first paragraph rejections remain:

Claims 1, 6, 8, 14, 15, and 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 14, and 18 recite the terms VS and NS respectively. It is unclear as to what the terms mean and how the terms are limited in relation to the metes and bounds of the claim.

Claim 8 recites, “wherein the candy has at least one retrogradation-inhibiting material, especially glycogen or a dextran with a degree of branching of more than 0.05”, thus reciting a broad range or limitation together with a narrow range or limitation. Reciting a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 8 recites the broad recitation at least one retrogradation-inhibiting material, and the claim also recites especially glycogen or a dextran with a degree of branching of more than 0.05 which is the narrower statement of the range/limitation. For the purpose of examination, the

narrow limitation will be considered merely exemplary of the remainder of the claim, and therefore is not required limitation.

Claim 14 recites, "The starch matrix has a network, which is formed by homocrystallites and/or heterocrystallities". It is unclear as to how such a network is made. The processing parameters and/or composition needed to make a network with the instantly claimed properties is unclear.

Claim 15 recites, "the candy contains a proportion of 3-15% of network capable starch, the proportion in percent in a), b) and c) being based on the dry weights and on the proportion of starch present." It is unclear as to what the starch is proportionally 3-15% of. It is unclear as to how the proportion percent of a, b, and c, is based on the starch proportion when the starch is optional. It is unclear as to what the "proportion percent" of a and b are as sections a and b do not recite a proportion percent. It is further unclear as to what a "network capable" starch is.

Claim 18 recites, "the preparation of the pre-product suppressing the formation of a network and the amorphous state being frozen in". It is unclear as to how the pre-product is prepared, how the formation of a network is suppressed and how the amorphous state is frozen in.

Response to Arguments, 112 second paragraph

Applicant's arguments filed December 10, 2009 regarding the remaining 112 second paragraph rejections have been fully considered but they are not persuasive.

Applicant argues that a person skilled in the art would understand a network of homocrystallites and/or herterocrystallites and that the terms would be understood. Additionally, applicant argues that the process limitations as shown in the specification and as evidenced by WO 03/035026 and WO 03/035044 would provide for clear meanings.

Applicant's argument is not convincing as applicant has not pointed to any meanings or definitions which make the unclear terms definite; Applicant merely states that the claims are definite without any supporting rational. As discussed above, the claims are unclear and the cited references which are referred in the remarks and

specification have any been considered only for their abstract as the references are not in English.

Claim Objections

Claim 8 is objected to because of the following informalities: Claim 8 recites, “retrogradation inhibiting material, especially glycogen and dextran”. It is believed that “dextran" is a misspelling and applicant intended to recite “dextrin” as disclosed in the specification, page 17 lines 7-23. Appropriate correction is required.

It is noted that applicant did not make any response and/or argument to the claim objection.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The 102(b) rejection of claims 1-13 and 16-18 as being anticipated by Chakraborty et al (US 5262191) as evidenced by Hui (ed.) Handbook of Food Science, Technology, and Engineering Volume 1 page 3-8, has been withdrawn in light of applicant’s amendments made December 10, 2009.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The 103(a) rejection of claim 14 as being unpatentable over Chakraborty et al (US 5262191) in view of Fennema (Food Chemistry Third Edition page 201) has been withdrawn in light of applicant’s amendments made December 10, 2009.

The 103(a) rejection of claim 15 as being unpatentable over Chakraborty et al (US 5262191) in view of Igoe (Dictionary of Food Ingredients page 133) has been withdrawn in light of applicant’s amendments made December 10, 2009.

The following prior art rejections are necessitated by applicant's amendments made December 10, 2009:

Claims 1, 6, 8, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chakraborty et al (US 5262191) in view of Fennema (Food Chemistry Third Edition pages 128, 129, and 201) and as evidenced by Hui (ed.) Handbook of Food Science, Technology, and Engineering Volume 1 page 3-8.

Chakraborty et al (Chakraborty) teaches of a jelly candy based on a starch mix (abstract). Since the starch candy takes the form of candy, the starch mix is a starch matrix (a matrix is defined as something that takes form or develops). Chakraborty teaches that the candy contains about 5-67.5% corn syrup, which is a sugar type and about 2.5-60% sweeteners, including fructose, which is a retrogradation inhibiting material, and 0% plasticizer (Chakraborty Column 5 lines 13-42 and Applicant's Specification pages 17-18). Chakraborty teaches that the candy is formed in a common manufacturing method wherein the preparation of a starch mix pre-product is used (Column 6 lines 10-42). Chakraborty teaches that the starch mix includes 10-60% of a acid converted or hydrolyzed high amylose starch, with an amylose greater than 50%, derived from wheat, corn, and barley (Column 2 line 9 through Column 3 line 68 and Column 4 lines 1-12). Applicant's specification, page 12, states that suitable NS starches include starches with a high amylose content of more than 30% and hydrolyzed starch, thus Chakraborty teaches network or NS starch as instantly claimed. Chakraborty teaches that the starch mix includes 40-90% of a low amylose starch (amylose 5-35%) derived from potato, tapioca, rice, corn, and wheat which is thin-boiled, (i.e. reduced dpn) or oxidized (Column 4 lines 1-61). Applicant's specification, page 11, states that suitable VS starches include rice, corn, and potato starch with an amylose content of less than 20% and starches that have been oxidized, thus Chakraborty teaches a VS starch as instantly claimed. Chakraborty teaches that the candy contains a total of 1-25% starch and 20-75% water (Column 5 lines 5-12 and 58-62), and thus, 0.1-15% of a network starch.

Regarding claim 18, the claim recites "the preparation of the pre-product suppressing the formation of a network and the amorphous state being frozen in", since Chakraborty teaches of the preparation of a pre-product comprising NS and VS, it would be expect that the formation of the network inherently be suppressed and the amorphous state inherently be frozen in as instantly claimed, absent any clear and convincing arguments and/or evidence to the contrary.

Regarding the starch matrix as having a network that is homocrystallities and/or heterocrystallities, since Chakraborty teaches of a starch matrix substantially the same as the instantly claimed starch matrix one of ordinary skill in the art at the time the invention was made would expect that the starch matrix taught by Chakraborty inherently have the same properties of the instantly claimed starch matrix, including having a network of homocrystallities and/or heterocrystallities, absent any clear and convincing arguments and/or evidence to the contrary.

Chakraborty is silent to the degree of polymerization (DP) of the first starch as more than 750 and the second starch as less than 300 as recited in claim 1, preferably wherein the first starch has a DP of greater than 1000 and/or the second starch has a DP of less than 50 as recited in claim 14, and to the second starch being capable of forming a microcrystalline crosslinked network with the first starch as recited in claim 1.

Fennema teaches that it was known to modify starches depending on the desired affect of the starch in the final food product (page 201). Fennema teaches that less conversion resulting in a higher DP provides for ability of the starch to produce viscosity and prevent sugar crystallization and that greater conversation resulting in a lower DP provides for enhanced sweetness and flavor enhancement (pages 128-129 and Table 3.7). Fennema teaches that a starch with a DE of 20-60 and thus a DE of about 1.6-5 has a mild sweetness and rapid dissolvability (page 129).

As evidenced by Hui ed. (Handbook of Food Science, and Technology, and Engineering page 3-8) amylose from maize and wheat starches was known to have a DP of 200-1200 and amylose from potato or tapioca starches was known to have a DP of 1000-6000.

Regarding the DP of the first starch as more than 750, preferably wherein the first starch has a DP of greater than 1000, as Chakraborty teaches that the first starch is made from potato or tapioca starch and as evidenced by Hui's showing that potato and rice starches were known to have a DP of 1000-6000, one of ordinary skill in the art at the time the invention was made would expect that the first starch as taught by Chakraborty have a DP of about 1000-6000. Furthermore, one of ordinary skill in the art would have been motivated to vary the DP of the starch depending on the final product desired, as was commonly done in the art as taught by Fennema. For example, it would have been obvious to one of ordinary skill in the art to use a starch with a greater DP in order to form a final candy in which the sugar did not crystallize over time as taught by Fennema. To adjust the DP of starch based upon the known effects of DP within the final product would have been obvious and routine determination.

Regarding the DP of the second starch as less than 300, preferably wherein the second starch has a DP of less than 50 and the second starch being capable of forming a microcrystalline crosslinked network with the first starch, as Chakraborty teaches that the second starch is made from corn or wheat starch and as evidenced by Hui's showing that corn and wheat starches were known to have a DP of 200-1200, one of ordinary skill in the art at the time the invention was made would expect that the second starch as taught by Chakraborty have a DP of about 200-1200. Furthermore, one of ordinary skill in the art would have been motivated to vary the DP of the starch depending on the final product desired, as was commonly done in the art as taught by Fennema. For example, it would have been obvious to one of ordinary skill in the art to use a starch with a lower DP, such as from about 1.6-5, in order to form a final candy in which the flavor and sweetness was enhanced as taught by Fennema. To adjust the DP if starch based upon the known effects of DP within the final product would have been obvious and routine determination. Furthermore, as Chakraborty teaches of NS and VS starches as instantly claimed, one of ordinary skill in the art would expect that the starches have substantially the same properties, including the second starch being capable of forming a microcrystalline crosslinked network with the first starch, as the instantly claimed starch.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chakraborty et al (US 5262191) in view of Fennema (Food Chemistry Third Edition pages 128, 129, and 201) and as evidenced by Hui (ed.) Handbook of Food Science, Technology, and Engineering Volume 1 page 3-8, further in view of Igoe (Dictionary of Food Ingredients page 133).

Chakraborty teaches of a candy comprising about 25-75% sweeteners, about 20-75% water, about 1-25% starch, about 0-10% flavoring and coloring and additional ingredients including humectants (Column 5 lines 5-62), however is silent to the candy as including 3-30% plasticizers as recited in claim 15.

Igoe teaches sorbitol is a humectant that is a polyol with good solubility in water that maintains good moistness in candy. Igoe teaches that sorbitol is 60% as sweet as sugar and is used in low calorie foods. Refer to page 133.

Regarding the candy as including 3-30% plasticizers, Chakraborty teaches that the composition includes about 56-100% sweeteners, starch, flavoring, coloring and water and thus 0-34% other ingredients including humectants, however is silent to the humectant used. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use sorbitol, which is a humectant in plasticizer, as the 0-34% humectant as taught by Chakraborty in order to form a moist candy as taught by Igoe.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chakraborty et al (US 5262191) in view of Fennema (Food Chemistry Third Edition pages 128, 129, and 201) and as evidenced by Hui (ed.) Handbook of Food Science, Technology, and Engineering Volume 1 page 3-8, further in view of Yatka et al (US 5458892).

Chakraborty teaches of a candy comprising about 25-75% sweeteners including aspartame, about 20-75% water, about 1-25% starch, about 0-10% flavoring and coloring and additional ingredients including humectants (Column 5 lines 5-62), however is silent to the candy as including retrogration inhibiting material selected from

the group consisting of glycogen and a dextrin with a degree of branching of more than 0.05 as recited in claim 19, preferably more than 0.3 as recited in claim 20.

Yatka et al (Yatka) teaches that highly branched indigestible dextrin, such as Fibersol 2, is added to confectionary compositions, including gummy type candies, wherein the ingredient does not induce dental cavities, can be consumed by diabetics, does not contribute to calories, does not cause gastrointestinal disturbances, acts as a bulking and sweetening agent, is water soluble, has properties like fiber, improves texture, flavor, and shelf life, replaces conventional sweeteners, stabilizes aspartame, and provides for faster flavor release (Column 1 lines 17-58, Column 2 lines 14-50, Column 5 lines 1-46, Column 6 lines 13-62, and Example 196).

Regarding the candy as including retrogration inhibiting material selected from the group consisting of glycogen and a dextrin with a degree of branching of more than 0.05, preferably more than 0.3, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include dextrin, with a high degree of branching, in the candy composition of Chakraborty in view of Yatka. One would have been motivated to do so in order to gain the benefits of highly branched dextrin, including improved texture, flavor, and shelf life, the stabilization of aspartame, as sweetener in the composition as taught by Chakraborty, and to provide for faster flavor release, as taught by Yatka. Note: As the dextrin taught by Yatka is highly branched, one of ordinary skill in the art would expect the dextrin to have a degree of branching above 0.05, preferably 0.3 as instantly claimed.

Response to Arguments

Applicant's arguments with respect to the prior art rejections claims 1, 6, 8, 14, 15, and 18-20 have been considered but are moot in view of the new ground(s) of rejection. The limitations argued have been clearly addressed in the rejection above.

Applicant's arguments regarding the inherent DP of starch in relation to fluidity as evidenced by the attached table have been fully considered but they are not persuasive. The evidenced relied upon by applicant is not convincing as it is incomplete; the table

does not include the method of acid modification and/or the fluidity of the modified starch.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KELLY BEKKER whose telephone number is (571)272-2739. The examiner can normally be reached on Monday through Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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